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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,785	05/01/2001	Kojiro Hamabe	P/1905-100	3695

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Ostrolenk Faber Gerb & Soffen
1180 Avenue of the Americas
New York, NY 10036-8403

EXAMINER

ORGAD, EDAN

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/830,785

Applicant(s)

HAMABE, KOJIRO

Examiner

Edan Orgad

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-98 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-47, 49-67 and 69-89 is/are allowed.
- 6) ☒ Claim(s) 48, 68 and 90-98 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 48 and 68 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 48 and 68, it not clear how the base station comparison is used for transmission power control on the mobile station when the determination of the presence/absence of a frame in which no error is detected, increases the control target value if there is no frame in which no error is detected, and gradually decreases the control target value if there is a frame in which no error is detected.

It is not clear why the control power is increased if there is no frame in which no error is detected.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 90-95, 97 and 98 are rejected under 35 U.S.C. 102(b) as being anticipated by Weaver et al (US 5,727,033).

Regarding claims 90, 93, 95 and 97, Weaver teaches a transmission power control method characterized in that: reception quality of a signal transmitted from a remote station is compared with a control target value (col. 3, lines 37-42), the comparison result is used for transmission power control on the remote station, and the number of bits in error is checked (col. 3, lines 46-52); and the control target value is increased in accordance with the number of bits in error and decreased in accordance with the number of bits not in error (col. 4, lines 28-33).

Regarding claims 91, 94 and 98, Weaver teaches transmission power control method characterized in that: reception quality of a signal transmitted from a mobile station is compared with a control target value (col. 3, lines 37-42), the comparison result is used for transmission power control on a base station, and the number of bits in error is checked (col. 3, lines 46-52); and the control target value is increased in accordance with the number of bits in error and decreased in accordance with the number of bits not in error (col. 4, lines 28-33).

Regarding claim 92, Weaver teaches a transmission power control method characterized in that: reception quality of a signal transmitted from a base station is compared with a control target value (col. 3, lines 37-42), the comparison result is used for transmission power control on a mobile station, and the number of bits in error is checked (col. 3, lines 46-52); and the control target value is increased in accordance with the number of bits in error and decreased in accordance with the number of bits not in error (col. 4, lines 28-33).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 96 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weaver et al (US 5,727,033).

Regarding claim 96, Weaver teaches the a control target value for controlling transmission power of the mobile station is increased in accordance with the number of bits in error and decreased in accordance with the number of bits not in error (col. 4, lines 28-33). However, Weaver fails to specifically disclose a control station comprising diversity synthesis of signals from a mobile station which are received by a plurality of base stations and therefore the number of bits in error are checked in the synthesized signal. However, official notice is taken, that is it is notoriously well known in the art to have diversity synthesis of signals from a mobile station which are received by a plurality of base stations. Therefore, it would have been obvious to Weaver's communication system to have diversity synthesis of signals from a mobile station which are received by a plurality of base stations in order to provide multiple users the ability to roam from cell site to another with out being limited to one base station.

Allowable Subject Matter

Claims 1-47, 49-67 and 69-89 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claims 1-12, 21, 23, 24, 35, 36, 41-54, 65-67, 83, 86 and 87, the prior art of record, specifically Weaver et al (US 5,727,033) teaches a frame error rate target is selected to minimize power without compromising signal quality. For example, if the frame error rate exceeds the frame error rate target, the power output level of the mobile station is increased to decrease the number of frame errors. If the frame error rate is below the frame error rate target, the power output level of the mobile station exceeds the optimum power output level, and the power output level of the mobile station is reduced (see Weaver, col. 1, lines 34-43). Other prior art cited, also teach the same principal, specifically with relations to IS95 and CDMA systems. In other words, it is well known in the art to use transmission power control schemes where a reception quality of a signal that is transmitted from a remote station is compared with a control target value, and the comparison result is used for transmission power control on the remote station to check whether a frame error exists and increase the control target value if a frame error is detected and on the decreasing the control target value is if no frame error is detected.

However, the present application, with regards to claims 1-12, 21, 23, 24, 35, 36, 41-54, 65-67, 83, 86 and 87, teach a transmission power control method where it is checked whether a frame error exists in the received signal, the control target value is increased if a frame error is detected, and the control target value is gradually decreased if no frame error is detected. The key difference with the present application is that the by introducing a gradual decrease in the control target value when no frame error is

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received and in comparison to the increasing the control target value when a frame error is received applicant has indicated that the correction value for increasing the control target value is greater than the correction value for decreasing the control target value.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 2003/0186653 Reducing interference in cellular communication networks.

US 6,587,447 Performing outer loop power control in discontinuous transmission mode.

US 6,487,191 Power control with interference reduction during soft handoff in CDMA cellular communication systems.

US 6,487,174 S/N measuring circuit and method, transmitting electric power control apparatus and digital communicating system.

US 6,434,124 Adaptive symbol error count based technique for CDMA reverse link outer loop power control.

US 6,396,867 Method and apparatus for forward link power control.

US 6,212,364 Reverse power control for reducing interference between terminals.

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US 6,154,659 Fast forward link power control in a CDMA system.

US 5,727,033 Symbol error based power control for mobile telecomm system.

EP 0 853 393 Transmitted Power Control.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edan Orgad whose telephone number is 703-305-4223. The examiner can normally be reached on 8:00AM to 5:30PM with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 703-305-4223. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Edan Orgad



June 24, 2004



NAY MAUNG
SUPERVISORY PATENT EXAMINER